

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) ~~Embedded~~ Encapsulated pigments consisting of:
a labile chromophore defining a surface; and
a plurality of nanoparticles embedded in a shell of being fabricated from a refractory and transparent inorganic material, ~~embedded in a shell consisting of aggregate the~~ nanoparticles adhering to the surface of the labile chromophore to form a shell thereabout with the labile chromophore being embedded within the shell.
2. (Currently Amended) The pigments according to Claim 1, ~~in which~~ wherein the labile chromophore is ~~in turn in the form of the size of~~ a nanometric particle.
3. (Currently Amended) The pigments according to Claim 1, ~~in which~~ wherein the labile chromophore is in the crystal form.
4. (Currently Amended) The pigments according to Claim 1, ~~in which~~ wherein the labile chromophore is chosen in the group consisting of: cadmium sulphoselenide $[[,]]$; hematite (Fe_2O_3) $[[,]]$; wolframium bronzes $\text{M}^{\text{I}}_n\text{WO}_3$, wherein M^{I} is an alkaline metal and $0.1 < n < 0.95$, ~~or else;~~ and molybdenum blues $\text{MoO}_x(\text{OH})_y$, $[[()]]$ wherein when $x = 2$, $[[\text{and}]] y = 1$ $[[; \text{or}]]$, and wherein when $x = 2.5$, $[[\text{and}]] y = 0.5$ $[[()]]$.
5. (Currently Amended) The pigments according to Claim 1, ~~in which~~ wherein the shell ~~of refractory and transparent material~~ consists of nanoparticles of oxides ~~chosen in~~ selected from the group consisting of: ZrO_2 $[[,]]$; Al_2O_3 $[[,]]$; SnO_2 $[[,]]$; ZrSiO_4 $[[,]]$; SiO_2 $[[,]]$; TiO_2 $[[,]]$; CeO_2 $[[,]]$; and ZnO .
6. (Currently Amended) The ~~embedded~~ pigments according to Claim 1 wherein the plurality of nanoparticles and the labile chromophore are selected according to an A':B' pairing, with A' being representative of the plurality of nanoparticles and B' being representative of the labile chromophore, the A':B' pairing being chosen in selected from the group consisting of:

Application No.: 10/506,983
Response to Office Action of September 30, 2005
Attorney Docket: NOTAR-011US

$\text{ZrSiO}_4 : \text{Fe}_2\text{O}_3[[,]];$

$\text{ZrSiO}_4 : \text{Cd}(\text{S}, \text{Se})[[,]];$

$\text{ZrO}_2 : \text{Cd}(\text{S}, \text{Se})[[,]];$

$\text{SiO}_2 : \text{Cd}(\text{S}, \text{Se})[[,]];$

$\text{Al}_2\text{O}_3 : \text{Cd}(\text{S}, \text{Se})[[,]];$

$\text{Al}_2\text{O}_3 : \text{Fe}_2\text{O}_3[[,]];$

$\text{SnO}_2 : \text{Fe}_2\text{O}_3[[,]];$

$\text{SnO}_2 : \text{Cd}(\text{S}, \text{Se})[[,]];$

$\text{SiO}_2 : \text{MoO}_x(\text{OH})_y;$

$\text{Al}_2\text{O}_3 : \text{MoO}_x(\text{OH})_y;$

$\text{SnO}_2 : \text{MoO}_x(\text{OH})_y;$

$\text{ZrO}_2 : \text{MoO}_x(\text{OH})_y;$

$\text{ZrSiO}_4 : \text{MoO}_x(\text{OH})_y;$

(where $x=2$, and $y=1$; or $x=2.5$, and $y=0.5$)

$\text{SiO}_2 : \text{M}_n \text{WO}_3;$

$\text{Al}_2\text{O}_3 : \text{M}_n \text{WO}_3;$

$\text{SnO}_2 : \text{M}_n \text{WO}_3;$

$\text{ZrO}_2 : \text{M}_n \text{WO}_3;$ and

$\text{ZrSiO}_4 : \text{M}_n \text{WO}_3;$

wherein x is equal to either 2 or 2.5 and y is equal to 1 or 0.5, and when $x=2$, $y=1$, and when $x=2.5$, $y=0.5$; and wherein ~~(where~~ $0.1 < n < 0.95$, and wherein M is ~~chosen in~~ selected from the group consisting of Na, K, Li, Ca, Sr, Ba, Cu, Zn, Cd, In, Sn, and La[~~()~~]].

7. (Currently Amended) [[The]] A process for the preparation of the nanometric particles according to Claim 1, in which encapsulated pigments, the encapsulated pigments including a labile chromophore and a plurality of nanoparticles, the nanoparticles adhering to a surface of the labile chromophore to form a shell thereabout with the labile chromophore being embedded within

the shell, the plurality of nanoparticles being fabricated from a refractory and transparent material, the process comprising the steps of:

[[- the]] adding salts of [[the]] desired metals ~~are added~~ to a known volume of alcohol to form a suspension;

[[-]] heating the ~~solution is heated~~ suspension under stirring up to complete solubilization of the salts;

[[-]] adding water to the suspension ~~is added in the desired amount~~ for facilitating hydrolysis of the salts;

[[, and]] heating the ~~solution is heated up~~ suspension to a temperature higher than 150°C for furthering the hydrolysis; and

[[-]] cooling the suspension to room temperature once the hydrolysis reaction is completed ~~is left to cool and possibly centrifuged;~~

collecting a precipitate of the encapsulated pigments; and

washing and drying the precipitate of the encapsulated pigments ~~is collected and washed and dried.~~

8. (Currently Amended) The process ~~for the preparation of the pigments according to Claim 1, in which~~ of Claim 7 wherein the nanometric particles are of labile chromophore is the size of a nanometric particle, and wherein the labile chromophore is prepared , and then with the nanometric particles of transparent refractory material are plurality of nanoparticles being subsequently superimposed thereon.

9. (Currently Amended) The process ~~for the preparation of the pigments according to Claim 1, in which~~ of Claim 7 wherein the labile chromophore is prepared in the form of a crystal ~~according to the known methodologies, and then with the nanometric particles of transparent refractory material prepared according to Claim 7 are~~ nanoparticles being deposited on the surface of said crystal the labile chromophore.

10. (Currently Amended) The process of Claim 7 wherein the plurality of nanoparticles

Application No.: 10/506,983
Response to Office Action of September 30, 2005
Attorney Docket: NOTAR-011US

~~are Refractory and transparent oxides in the form of nanometric particles chosen in~~ are fabricated from a refractory and transparent oxide selected from the group consisting of: ZrO_2 [[,]]; Al_2O_3 [[,]]; SnO_2 [[,]]; ZrSiO_4 [[,]]; SiO_2 [[,]]; TiO_2 [[,]]; CeO_2 [[,]]; and ZnO .

11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Currently Amended) The process of Claim 10 further including the step of utilizing the oxide ~~Oxides according to Claim 10 for use~~ in the textile field.
15. (Previously Presented) Pigments according to Claim 1 for use in the catalysts, cosmetic and in the plastic-, rubber-materials industry.
16. (Currently Amended) The process of Claim 10 further including the step of utilizing the oxide ~~Oxides according to Claim 10 for use~~ in the catalyst, cosmetic and in the plastic-, rubber-materials industry.
17. (New) The process of Claim 7 further including the step of applying the encapsulated pigments to a ceramic body.
18. (New) The process of Claim 7 further including the step of applying the encapsulated pigments to a textile article.
19. (New) The process of Claim 10 further including the step of coating at least one surface of a porcelain stoneware body.
20. (New) The process of Claim 10 further including the step of coating a non-ceramic substrates.